clusion that the genus Lycopodium should be interpreted as a reduction series, or to afford a basis for the supposition that the sporangium-bearing organ of the Lycopodiaceae has been "derived from a branch structure which had the morphological value of an axillary bud."—ALMA G. STOKEY.

Embryo and endosperm of Potamogeton.—COOK[32] has investigated material of *P. lucens* obtained from Cuba. The embryo was found to resemble closely that of Alisma in its development. In endosperm formation a transverse wall chambers the sac at the first division; in the micropylar chamber the endosperm formation proceeds as a series of free nuclear divisions, usually with parietal placing; the antipodal chamber develops as a haustorial extension of the sac into the chalaza, and during this development the second daughter nucleus of the primary endosperm nucleus seems to be very active, but does not divide.—J. M. C.

Ophioglossum simplex.—This rare Sumatran species has been collected again, and these new specimens show to BOWER[33] an outgrowth which, evidently single, represents a sterile blade, of which there was no such indication in the specimen he had examined previously. The fact is important because of the difference of opinion as to the phylogenetic position of Ophioglossum. CAMPBELL has regarded *O. simplex* as the most primitive known member of the genus, while BOWER has claimed it to be a reduction form. The evidence just reported would seem to justify the latter contention.—J. M. C.

Anthocyan and chlorophyll.—An interesting bit on the function of anthocyan is the observation by MOLÉR[34] that the red leaves of a species uniformly contain less chlorophyll than the green leaves. The ratio runs between 1.08 and 1.27. This seems to be difficult to reconcile with TISCHLER's hypothesis that anthocyan enables the plant to nourish itself better and so to stand a more severe climate. —C. R. B.

Radioactivity.—ACQUA reports[35] that salts of uranium and thorium, even in very dilute solutions, injure seedlings of wheat by reducing the development of the primary root. Germination was also retarded. His experiments supplement those on radium and other radioactive substances by other investigators.—C. R. B.

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[32] COOK, MELVILLE THURSTON, The development of the embryo sac and embryo of *Potamogeton lucens*. Bull. Torr. Bot. Club **35**: 209–218. *pls. 9, 10*. 1908.

[33] BOWER, F. O., Note on *Ophioglossum simplex* Ridley. Annals of Botany **22**: 327, 328. 1908.

[34] MOLÉR, T., Ueber den Chlorophyllgehalt anthocyanführender Blätter (Vorläufige Mitteilung). Bot. Notiser **1908**: 49–53. 1908.

[35] ACQUA, C., Sull'azione dei sali radioattivi di uranio e di torio nella vegetazione. Annali di Botanica **6**: 387–401. 1908.